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REMARKS

Claims 20-32 are pending in this application. Claims 33-36 are cancelled, without prejudice to pursue them in a related application. Claims 1-19 and 37-48 were previously canceled. Claims 20-25 and 29 are amended, and claims 49-52 have been added to further define the invention. No new matter has been introduced.

The Examiner rejected claims 23 and 29-32 under 35 U.S.C. § 112, second paragraph as being indefinite for insufficient antecedent basis. Applicants have amended claims 23 and 29 to remedy these issues. Applicants request that the rejection be withdrawn.

The Examiner rejected claims 20, 24, 26, 29-33, 35 and 36 under 35 U.S.C. § 102(e) as being anticipated by Scirica (U.S. Patent No. 6,102,853) and rejected the remaining claims—claims 21-23, 25, 27, 28 and 34—under 35 U.S.C. § 103(a) as being unpatentable over Scirica. Applicants traverse these rejections.

Scirica

As general background, Figures 11-29 of Scirica disclose “a surgical instrument 200 [that] includes a multiconfigurably articulating arm 210 which is operable *from a freely flexible condition to a rigid, locked configuration* by way of a handle assembly 212.”

Scirica, col 6:15-22 (emphasis added). The articulating arm consists of a series of arm segments 224a that

are preferably formed of a polycarbonate material or the like while insert segments 224b are preferably formed of a metal material to provide reinforcing strength *to enhance the rigidity of articulating arm 210* when in a tensioned condition.... Insert segments 224b are further provided with a series of conically shaped protrusions 224g which come to a point and serve as sharpened contact engagement points with the proximal surfaces of arm segments 224a upon tensioning of articulating arm 210.

Scirica, col 7:27-50. While not described as such in the specification, Figures 17 and 18 of Scirica clearly show the “series of conically shaped protrusions 224g” to be limited to the most distal edge of insert 224b (e.g., where element 224b is indicated by a lead line in Figure 18).

The device is described as being positioned in an unlocked configuration, positioned at a desired location, and then locked at that position:

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During a given surgical procedure, articulating arm 210 (*which is either initially in a nonlocked configuration or is placed in such configuration*) is manipulated by the user to the desired configuration and/or position at the surgical site. *To lock articulating arm 210 in the desired configuration*, tension control lever 212b is squeezed toward stationary housing portion 212a. Cable 226 which is anchored in tension control lever 212b is thereby pulled proximally in the direction of arrows "E" of FIG. 19 such that insert segments 224b, which are axially aligned relative to each other, impinge into the inner surfaces of arm segments 224a to enhance the rigidity of articulating arm 210 and reduce the stresses created on arm segments 224a by reducing the moment arm length with respect to cable 226.

Scirica, col 8:1-14.

Claims 20 and 49

Scirica does not teach or disclose the invention of amended claim 20, or new independent claim 49. Claim 20 has been amended to claim a flexible arm having a plurality of links each having a hole therethrough and a proximal surface and a distal surface, an elongate element extending through the holes, wherein tensioning the elongate element locks the plurality of links in a fixed orientation, and a screen positioned between an adjacent proximal surface and distal surface of the at least a pair of the plurality of links, the screen *sized to enhance frictional engagement over a substantial area of the adjacent proximal surface and distal surface* of the at least a pair of the plurality of links when the elongate element is tensioned. New independent claim 49 claims an arm that includes, among other elements, a frictional element disposed about the elongate element and between adjacent links, the frictional element enhancing frictional engagement between adjacent links when the elongate element is tensioned, wherein the frictional element *is not connected to either of the adjacent links*. Claims 21-23 have also been amended to more clearly define the invention.

As to claim 20, Scirica does not teach or disclose such a screen positioned between adjacent links of the flexible arm. Instead, as noted above, Scirica discloses an articulating arm that has a series of alternating arm segments 224a (made of plastic) and insert segments 224b (made of metal), where the inserts include a series of conically shaped protrusions 224g. The protrusions are located only on a leading edge of the insert segment. Thus, unlike the present invention, the protrusions 224g act on only a small portion of the contact area

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between adjacent arm segments. The screen of the invention enhances frictional engagement over a substantial surface area, thereby reducing the amount of play between links when the arm is tensioned. Claim 20 requires that the screen be sized to enhance frictional engagement over a substantial area of the adjacent proximal surface and distal surface of the at least a pair of the plurality of links when the elongate element is tensioned. Scirica does not teach or describe such a device, and as such, Applicants respectfully request the withdrawal of the rejection as to claim 20.

Regarding claim 49, it requires that the frictional element not be connected to either of the adjacent links. Figure 19 of the application clearly depicts the frictional element as a separate element, not connected to either of the adjacent links. Scirica's protrusions 224g protrude from inserts 224b, which in turn are snapped into arm segments 224a. The protrusions are not an element that is not connected to a link. Thus, Scirica does not teach or describe such a device, and, as such, Applicants respectfully request the withdrawal of the rejection as to claim 49.

Claim 24

Scirica does not teach or disclose the invention of amended claim 24, or new independent claim 50. Claim 24 has been amended to more clearly define the invention. The claimed configuration is clearly shown in Figures 20A and 20B of the application. As amended, claim 24 claims a device for holding a medical instrument that includes an arm having a plurality of links, a body and a base link having a proximal end and a distal end, and being aligned with the body on the proximal end along a first axis and being aligned with one of the plurality of links on the distal end along a second axis, wherein the second axis forms an angle with the first axis of between 45 and 90 degrees. Applicants submit that Scirica does not teach or suggest the elements claimed in claim 24 or the claims that depend from claim 24, and respectfully request the withdrawal of the rejection as to claim 24. Further, claims 50-52 contain some similar elements and are also not taught or suggested by Scirica.

Claim 29

Scirica does not teach or disclose the invention of claim 29. Claim 29 claims a device for holding a medical instrument that includes, among other elements, a flexible arm having a

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plurality of links, a tensioning device movable between a first position and a second position, the first position locking the plurality of links in a fixed position, the second position permitting the plurality of links to move relative to one another, and an actuator coupled to the tensioning device for moving the tensioning device between the first and second positions, *the actuator being biased toward the first position so that the flexible arm is in the fixed position, wherein actuation of the actuator moves the tensioning device to the second position so that the flexible arm is free to move.* Thus, unlike Scirica, the arm of the current invention is biased in the fixed configuration rather than the flexible configuration. As is described in the specification at page 15, lines 1-11, the user needs to actuate the actuator to move the arm to the desirable position, and then release the actuator to render the arm in a fixed configuration. As is described above in the two long excerpts attributed to Scirica, the device of Scirica is designed to be biased in the flexible configuration and an actuator is used to lock the arm in the fixed position. Thus, Applicants submit that Scirica does not teach or suggest the elements of claim 29, and respectfully request the withdrawal of the rejection as to claim 29.

The remainder of the claims 33, 35 and 36 rejected as anticipated by Scirica have been cancelled, without prejudice to pursue them in a related application.

Obviousness

The Examiner rejected the claims 21-23, 25, 27, 28 and 34 under 35 U.S.C. § 103(a) as being unpatentable over Scirica. Applicants have cancelled claim 34, without prejudice. As to the remaining claims, Applicants traverse this rejection.

Applicants submit that the Examiner has failed to establish a prima facie case of obviousness. As the Examiner stated, with respect to each of the claims, Scirica fails to teach the elements claimed in the above claims, yet the Examiner asserts that the claimed inventions would have been obvious to one skilled in the art. These statements are unfounded. The Examiner has the burden of presenting evidence that the claimed elements were known in the prior art. Conclusory statements do not fulfill the Examiner's obligation. See In re Lee, 61 USPQ2d 1430, 1434-35 (Fed. Cir. 2002).

Further, the cases cited by the Examiner to support the rejections are not analogous to the facts at hand. Claims 21-23 claim that the frictional element is a screen and that the screen

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is either attached or not attached to one of the links. With respect to claims 21-23, the Examiner cited In re Leshin, 125 USPQ 416 (CCPA 1960) as standing for the proposition that it would be obvious to one skilled in the art to use any type of material as the frictional element as a matter of design choice. Leshin stands for that proposition that, where a container made of plastic was known prior to a claimed invention, it is obvious to select a known plastic to make that container. Such a case is not analogous to the facts in this application. Claims 21-23, did not, and as amended do not, claim a material. Further, in this case, Scirica is cited by the Examiner as disclosing a frictional element—protrusions 224g on the insert 224b. As is described above, such a disclosure in no way would not suggest to one skilled in the art to use a screen as a frictional element.

Claims 24 (as amended) and 25 and claim the angle the base link makes with the elongate element and claims 27 and 28 claim the offset position of the base link relative the axis. With respect to these claims, the Examiner cited In re Aller, 105 USPQ 233 (CCPA 1955) as standing for the proposition that it would be obvious to one skilled in the art to reach an optimum range or value and In re Boesch, 205 USPQ 215 (CCPA 1980) as standing for the proposition that an optimum value of a result effective variable involves only routine skill in the art. Boesch is applicable to cases involving result-effective variables, which is not the case in any of these claims. Aller held that a claimed process performed at particular temperature and acid concentration was prima facie obvious over prior art that disclosed a range of temperature and acid concentrations, even though particular temperature and acid concentration were outside the prior art ranges. Aller also is not applicable to the facts of the case.

As a result, Applicants submit that the Examiner has not made a prima facie case of obviousness, and respectfully request the withdrawal of the rejection.

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If the Examiner believes that a discussion of the pending claims would expedite the prosecution of this application, the Examiner is invited to contact the undersigned.

Respectfully submitted,

By: 

Brian S. Tomko
Reg. No. 41,349

Johnson & Johnson
One Johnson & Johnson Plaza
New Brunswick, NJ 08933-7003
(732) 524-1239
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